Monroe County
Water Quality Management Agency
Annual Report 2001

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County Executive

Monroe County Water Quality Management Agency Annual Report **2001**

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The photograph on the cover was taken by Dr. Joseph Martin at Grandview Beach in Greece.

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In Monroe County there are nine separate departments and agencies that have a role in protecting water quality. They are:

- Department of Environmental Services
- Department of Health
- Department of Parks
- Department of Planning and Development
- Department of Transportation
- Monroe County Water Authority
- Natural Resources Conservation Service
- Soil and Water Conservation District
- Cornell Cooperative Extension

All have ongoing water quality programs. Some protect drinking water or ensure that current discharge standards are met. Others remediate existing problems and prevent new ones or educate citizens so they can help to protect water quality.

New Programs

Several new programs were initiated in 2001. With the assistance of County staff, the towns and villages in the County formed the Stormwater Coalition to prepare together for federal Phase II Stormwater Regulations. The Water Education Collaborative was established to coordinate water quality educational activities. Best Management Practices (BMPs) were adopted for commercial users of silver and task groups were initiated to establish BMPs for road deicing and stormwater pond design.

Projects Completed

Many projects were completed in 2001. The County's Water Quality Management Advisory Committee completed development of criteria that will be used to determine when problems in the Rochester Embayment no longer exist. Infrastructure improvements to culverts, watermains and water tanks were completed. Also a watershed plan was completed for the North Chili Tributary of Black Creek.

Enhanced programs

Existing programs were enhanced. An extensive advertising campaign educated citizens about proper household hazardous waste (HHW) disposal and HHW facility hours were extended. Wastewater treatment plants underwent modifications to improve treatment and energy efficiency, and reduce odors. Agricultural programs were expanded.

Federal Assistance

Federal agencies occasionally assist Monroe County with projects. Two such projects were conducted in 2001. The U.S. Army Corps of Engineers sponsored a study of options to reduce the days of beach closings at Ontario Beach Park, and the U.S. Geological Survey developed a water quality model for the Irondequoit Creek watershed.

Special Events

Special events during 2001 included educational tours of Irondequoit Bay and tree planting along eroded sections of Irondequoit Creek. Seminars were conducted on pollution prevention for auto recyclers and metal finishers and on

stormwater management practices. Two hundred volunteers participated in the International Coastal Clean-Up along Lake Ontario and the Genesee River.

New Problems

An unfortunate event occurred in December. A CSX freight train crashed near the mouth of the Genesee River and acetone and methylene chloride were released to the river and riverbank.

Surface and Groundwater Classification

New York State classifies each waterway according to its "best use" (drinking water, swimming or fishing and boating). The Water Quality Coordinating Committee recommended to the New York State Department of Environmental Conservation (NYSDEC) that the Barge Canal (Erie Canal) and the Genesee River be consistently classified with a best use of swimming throughout the County.

Monitoring

Some monitoring is required by law and is continuous, for example, to ensure that our drinking water supply is safe and that wastewater treatment plant discharges do not impair the "best use" of the surface waters to which they discharge. Additional voluntary monitoring is also performed by federal, state, or local government agencies or by universities to study the overall health of waterways. Such monitoring measures concentrations of nutrients, metals or organic compounds, or measures the impact of exposure to sediments or surface water on certain sensitive aquatic species. Performed over the long term (years and decades), this monitoring reveals whether or not water quality restoration programs are effective.

Monitoring in 2001 indicated that Monroe County drinking water met or exceeded all standards, and that exceedances (monitoring values that do not meet standards) at wastewater treatment plants were rare. For information about trends in surface water quality, see the Monroe County *Environmental Health Report Card* (April 1999). Copies may be obtained by contacting Richard Elliott at 274-6067. The *Environmental Report Card* is in the process of being updated and is expected to be republished in 2003.

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I. Introduction

A. Water Quality Management Structure

The role of the Monroe County Water Quality Management Agency (WQMA) is to protect and improve Monroe County water quality at the watershed level by developing, implementing and monitoring the effectiveness of policies and programs. The WQMA is chaired by Deputy County Executive Richard Mackey and is comprised primarily of Monroe County department heads. (Figure 1 portrays the Monroe County Water Quality Management Structure and the relationship among the Agency, Committees, and Task Groups.)

The Water Quality Coordinating Committee (WQCC) is the technical advisory committee to the WQMA. It consists of representatives from municipal, county, state and federal governments and agencies. The WQCC coordinates the implementation of water quality related activities. As part of this implementation effort, the WQCC oversees the work of the Remedial Action Plan (RAP) Task Group for Small Business Pollution Prevention. It also oversees other work groups it has established, such as those for streambank erosion and stormwater.

The Water Quality Management Advisory Committee (WQMAC) is the RAP advisory committee and the public advisory committee to the WQMA. It consists of representatives from four sectors: public officials, economic interests, environmental interests, and citizens. The WQMAC oversees five RAP Use Impairment Oversight Committees: Drinking Water, Eutrophication, Habitat, Toxics, and a Committee for the four remaining use impairments.

B. Significant Economic and Demographic Changes

- According to the 2000 census, Monroe County's population is 735,343 people.[1] Population density per square mile is 1,109 for the County and 5,988 for the City of Rochester based on this data. The 1990 census reported Monroe County's population to be 713,968 people, while the population density was 1,083 people per square mile in the County and 6,473 people per square mile in the City of Rochester.

- Commercial development (proposed major projects, regardless of status) in 2001[2] was as follows:

New Commercial Development Activity, 2001	
Municipality	Gross Floor Area
Clarkson, East Rochester, Riga, Rochester, Rush, Webster, Wheatland	0
Hamlin, Parma, Perinton	1-15,000
---	15,001-30,000

New Commercial Development Activity, 2001	
Municipality	Gross Floor Area
Henrietta, Pittsford, Sweden	30,001-100,000
Chili, Gates, Irondequoit, Mendon, Ogden	100,001-200,000
Brighton, Greece, Penfield	200,001-300,000
---	300,001-400,000
---	400,001-1,000,000
---	>1,000,000

- Municipal building permits for single family homes in 2001[2] were as follows:

Municipal Building Permits (Single Family), 2001	
Municipality	Building Permits
Brighton, East Rochester, Gates, Hamlin, Irondequoit, Riga, Rush, Sweden, Wheatland	0-25
Clarkson, Rochester	26-50
Mendon	51-75
Chili, Henrietta, Ogden, Parma Penfield, Perinton, Pittsford	76-150
Greece	151-200
Webster	201-250
---	251-300

II. Water Quality Planning and Educational Activities

A. Remedial Action Plan (RAP) Implementation Activities

1. The *Stage I Rochester Embayment RAP* was published in 1993. It identified 12 beneficial uses that have been impaired due to water quality problems. The *Stage II RAP* (1997) made several recommendations for actions to address the identified use impairments. One RAP Implementation Task Group was active in 2001, the Small Business Pollution Prevention Task Group (see II.G).

2. RAP Use Impairment Oversight Committee: A committee completed draft delisting criteria (locally derived standards that will determine when a use impairment no longer exists) and monitoring methods for three use impairments: beach closings, aesthetics and plankton. The other Use Impairment Oversight Committees have already completed their initial task of developing delisting criteria and monitoring methods.

3. Four towns (Brighton, Chili, Greece and Penfield) had ongoing individual intermunicipal agreements (IMAs) with the County in 2001. An IMA was ongoing among Monroe County and four other municipalities in the Northrup Creek/Long Pond watershed, and an IMA was ongoing among Monroe County and 11 other municipalities in the Irondequoit Creek watershed. All of the towns and villages, which have formed the Stormwater Coalition, entered into an IMA to work together to prepare for federal Phase II Stormwater Regulations.

4. In addition to the RAP Task Group project, other RAP recommendations were being implemented in 2001. They were:
    - Watershed planning (see II.B)
    - Inclusion of stormwater wetlands as part of development proposals (see III.D)
    - Education on wetlands (see II.F)
    - Mercury pollution prevention (see II.G)
    - Promotion of agricultural BMPs (see III.E)
    - Swirl concentrator (underground removal of stormwater pollutants) (see III.D.3)
    - Lawn care (see II.E and II.F)
    - Storm drain stenciling (see II.F.3)
    - Water Education Collaborative (see II.E.)
    - Reduce/eliminate phosphorus discharges from small wastewater treatment plants (see III.C)
    - Workshop for municipalities and engineers about stormwater pollution prevention plans (see II.F.2)

B. Watershed Planning

1. Watershed planning was ongoing in 2001 for the watersheds of Northrup Creek/Long Pond and Oatka Creek.

2. Watershed plans were being implemented for the North Chili Tributary of Black Creek and Irondequoit Creek.

3. A Watershed Assistance Grant was received from River Network (a program supported by the U.S. Environmental Protection Agency) for a State of the Basin Report for the entire Black Creek watershed. (Contact: Rochelle Bell at 274-5464)

C. Key 2001 Water Quality Management Advisory Committee Accomplishments

The WQMAC met four times. The Committee completed the task of developing "delisting criteria" for the Rochester Embayment Area of Concern (AOC). The "delisting criteria" are standards that will be used to determine when certain water quality problems are no longer present in the AOC. The WQMAC also discussed its future role and activities and decided that it will focus on oversight of RAP implementation and monitoring progress towards delisting.

D. Key 2001 Water Quality Coordinating Committee Accomplishments

- Revised criteria for WQCC member voting privileges, updated membership based on attendance, and re-solicited involvement of non-participating members.
- Held four quarterly meetings focusing on subjects of general interest to municipal representatives. The subjects covered were: drainageway maintenance and stream protection; water supply protection; federal wetland regulations; sanitary sewer overflow regulations; West Nile Virus prevention planning; and road deicing.
- Supported and tracked progress of work of the Monroe County Stormwater Coalition to identify and analyze options for pooling resources to meet the Federal Phase II Stormwater Regulations.
- Sponsored optional tours for members in association with quarterly meetings. Provided tours of innovative environmental protection technology at the Brighton Highway Department and the Rochester Pure Waters District's combined sewer tunnel storage and treatment system.
- Updated the WQCC five-year workplan and prepared a one-year workplan of water quality activities being undertaken by WQCC member agencies.
- Reallocated some Finger Lakes-Lake Ontario Watershed Protection Alliance (FL-LOWPA) funds for use at the environmental fair at the Seneca Park Zoo and for stormwater awards. Solicited and

evaluated proposals for use of 2002-2003 FL-LOWPA funding. Recommendations were postponed pending actual funding availability.

- WQCC members from several agencies cooperated on carrying out a WQCC Level 2 mini-grant funded project to organize local participation in International Coastal Clean-Up in September. Other WQCC members planned an agricultural pesticide amnesty day with funding obtained from WQCC Level 3 mini-grant funding. The WQCC allocated Level 1 WQCC mini-grant funds for stormwater award plaques, wetland plants, and Community Water Watch supplies.
- Solicited WQCC member involvement in a process to submit information for the State Waterbody Inventory/Priority Waterbody Inventory effort. Staff and members compiled information, reviewed it with WQCC members and the public, and submitted it to the New York State Department of Environmental Conservation (NYSDEC).
- The WQCC reviewed, revised, and ultimately recommended eight sets of delisting criteria related to Rochester Embayment RAP use impairments.
- The WQCC reviewed and updated a five-year workplan that serves as the County's water quality strategy.
- Established a Road Deicing Task Group to track the use of road deicing substances and the impacts on the environment.
- Enlisted the involvement of the Environmental Management Council Issues Committee in summarizing methodologies to discourage geese from living in or near stormwater facilities.
- Established a Basin Design Task Group to develop standards for pond design to maximize water quality, discourage nuisance geese, minimize maintenance, and minimize neighbor objections.

E. Key 2001 Water Education Collaborative Accomplishments

. The Water Education Collaborative (WEC) was established in 2001 and is located at the Rochester Museum and Science

Center. A Director, Margit Brazda Poirier, and part-time assistant were hired to staff the work of the Collaborative. The WEC held its first meeting in May with 20 member organizations.

- WEC educational programs include:
  - International Coastal Clean Up: Over 200 volunteers picked up over two tons of litter along the shores of the Genesee River and Lake Ontario. WEC provided coordination, planning, implementation, publicity and finances.
  - Community Water Watch: WEC provided publicity, networking, and financial support.
  - Great Lawns/Great Lakes: WEC provided publicity, networking, and financial support.
  - 7th Annual "Our Fragile World" environmental fair at the Seneca Park Zoo: WEC provided planning, publicity, and implementation assistance.

- "What's in Our Water" Teacher Training Workshops at the University of Rochester: WEC provided financial and technical support.
- WEC was represented at various forums and community events.

F. Key 2001 Educational Accomplishments

1. The Environmental Health Laboratory
   - Participated for four days in the Rochester Museum and Science Center's Science and Technology Week in December.
   - Instructed for the aquatics topic for the Monroe County Soil and Water Conservation District's Envirothon competition.
   - Participated in the Community Water Watch training sessions.
   - Provided equipment for the Rochester Museum and Science Center's *A River Runs Through Us* program on water quality in the Genesee River.
   - Narrated tours of Irondequoit Bay as part of Irondequoit Bay Awareness Week and for the League of Women Voters to highlight Monroe County efforts and successes in restoring Bay environmental quality.
   - Instructed a field trip to Powder Mills Park for Rochester City School District School 35 consisting of five fourth-grade classes who were taught water quality monitoring techniques and concepts such as stream velocity, temperature, turbidity, and dissolved oxygen.
   - Conducted, in conjunction with the Monroe County Department of Planning and Development, a series of tours of Irondequoit Bay for regulatory staff from surrounding municipalities and NYSDEC to highlight code and Environmental Law enforcement issues.

2. The Department of Health Bureau of Water Quality Planning:
   - Published the Summer 2001 and Winter '01/'02 issues of the *Watershed* newsletter. Each issue was mailed to approximately 2,400 people and was distributed at environmental fairs and exhibits.
   - Presented/instructed for the following events and programs: "Our Fragile World" environmental fair at the Seneca Park Zoo, Conservation Field Days, and Science Exploration Days.
   - The one-year trial of the Community Wetlands Watch program was completed. After suggested improvements are made to the participants manual, the program will be marketed to the community.
   - The Community Water Watch (CWW) program:
     - Had 35 teams participating.
     - Coordinated three training sessions for volunteers, averaging 35 participants per session.
     - Held a volunteer appreciation picnic with approximately 30 attendees.
     - Hired a part-time volunteer coordinator for CWW and Great Lawns/Great Lakes. The volunteer coordinator designed and coordinated a phone survey of volunteers in order to help improve the program.
     - Distributed three issues of the CWW newsletter to approximately 250 participants and interested professionals.
   - The Great Lawns/Great Lakes program coordinator (an employee of Cornell Cooperative Extension):

- Focused on making environmentally friendly lawn care presentations at libraries, community centers and other venues.
- Submitted many grant applications to support the program.

- Hosted a Better Site Design Conference in collaboration with the Environmental Management Council and Soil and Water Conservation District (SWCD), with 125 attendees from municipalities and engineering firms who learned about development practices that protect water quality.

3. The Monroe County Department of Environmental Services (DES):
   - Provided materials for storm drain stenciling projects by local groups.
   - Combined forces with the local NBC affiliate (10NBC-TV) on an extensive advertising campaign. The campaign spotlighted proper household hazardous waste (HHW) disposal, curbside recycling, alternative disposal methods, residential recycling, and water quality issues addressed by the County's wastewater treatment facilities. DES also partnered with Entercom Radio to address proper business recycling practices.
   - Continued its educational efforts by visiting schools, community events and business organizations and by offering DES facility tours, educational materials, personal presentations and business presentations.
   - Enhanced the information on the county's website (www.monroecounty.gov) in reference to DES programs. The site now features an on-line calendar of events, alternative disposal options, and history of the HHW program.
   - Continued its "Chet the Cheetah" educational program by distributing 15,000 calendars to all third-graders in Monroe County. In addition "Chet" unveiled his own website promoting recycling (www.ChetTheCheetah.org) with on-line games aimed at children to promote recycling.

4. The Monroe County Water Authority (MCWA):
   - Provided school and private group tours at the Shoremont Water Treatment Plant. A series of videos and teaching aids are used to explain the treatment, distribution, and quality control programs at the plant.
   - Published a water quality report in conformance with the State's Annual Water Supply Statement requirement and the EPA's Consumer Confidence Report Rule.
   - Continued to expand its web presence at www.mcwa.com. The Authority's website includes a company profile and consumer information, as well as a treatment plant tour, conservation and water quality information, and a "Kids' Water Fun" page.
   - Participated in the Rochester Museum and Science Center's Science Fair and the environmental fair at the Seneca Park Zoo.

5. The Cornell Cooperative Extension (CCE):
   - In cooperation with the Bureau of Water Quality Planning, implemented and continued funding the Great Lawns/Great Lakes program utilizing CCE's Master Gardeners.
   - Coordinated with the SWCD in providing technical assistance and education for the Agricultural and Environmental Management Program being implemented within the Oatka Creek and Braddock Bay watersheds.
   - Expanded its role in providing leadership, technical assistance, and guidance in assisting municipalities regarding farmland protection policy associated with farm lands within agricultural districts and under development pressure.
   - Continued to provide nutrient management training for grain, dairy, fruit, and vegetable farmers throughout the County.
   - Continued research regarding the use of compost on athletic fields to further reduce nutrient loading on adjacent tributaries.

- Provided guidance to municipalities and landowners regarding manure management planning and practices.
- Provided lawn care companies, schools and municipalities with fertilization and pest-control information.

6. The Environmental Management Council (EMC):
   - Toured the wetland mitigation bank in Chili.
   - Sponsored the seminar "Federal and State Wetland Regulations and Information Resources."
   - Participated in the "Our Fragile World" event at the Seneca Park Zoo.
   - Organized three EMC monthly meeting programs which focused on water education issues including: erosion concerns along the Genesee River and Scottsville Road, West Nile Virus, and EPA Phase II stormwater regulations.
   - Organized a picnic and hike around Whitebrook Nature area in Perinton.
   - Co-sponsored "Better Site Design and Stormwater Management Practices" conference.

7. The Soil and Water Conservation District (SWCD) and the USDA Natural Resources Conservation Services (NRCS):
   - Held stormwater management programs on *Design & Selection of Water Quality Practices* in Syracuse and New York City, taught by Paula Smith and Don Lake P.E. of the New York State Soil and Water Conservation Committee; 25 attendees at each location.
   - Co-hosted *Stormwater Design Conference* at Syracuse University, with the Monroe County Health Department, Department of Planning and Development, and EMC; 100 attendees.
   - Conducted tree planting on eroded streambanks along Irondequoit Creek in Powder Mill Park to demonstrate bioengineering practices as an alternative to "hard" engineered solutions.
   - Hosted a series of two-hour Monroe County Envirothon Workshops to help prepare area high school students for the Spring Review Session and Envirothon Competition. Five environmental topics were taught to the students who were then tested through a competition among schools. Topics included: forestry, soils, wildlife, aquatics, and a current issue.
   - Held the 10th Annual Monroe County Envirothon Competition at Black Creek Park. As a culmination of the Envirothon Workshops, 20 teams representing six area schools participated in the competition. The first-place winner, Greece Athena, went on to place very well at the New York State competition.
   - Held the annual Conservation Field Days at Mendon Ponds Park. Eighteen local elementary schools participated with approximately 1,450 sixth graders. Students learned about environmental conservation topics during 15-minute sessions. Instruction assistance was obtained from dozens of area specialists and professionals, including those from the Health Department.
   - Participated in the annual environmental fair at the Seneca Park Zoo where approximately 24 environmental organizations set up display booths to educate the public on environmental issues; approximately 7,000 visitors attend.
   - Held a field trip as part of the County Land Use Planning Seminar Series to visit stormwater management facilities to demonstrate their features; 20 planning/conservation board attendees.
   - Along with other County agencies, taught about water quality issues at *Preserving Earth Through Education* (PETE), an annual event that brings a day of environmental programs to area schools.

G. Key 2001 Pollution Prevention Activities

- DES continued the mercury thermometer exchange program in an effort to educate County residents on the hazards of mercury.
- The DES expanded its permanent Household Hazardous Waste (HHW) Facility hours to handle the increased demand. In addition, nine "regional" collections were held at town garages for customer convenience. The regional collections differed from years past in that more towns and villages partnered to have fewer overall mobile collection dates. Attendance at the regional collections were the highest seen to date. See Table 1 for the 1991 - 2001 HHW Collection Summary.

- DES and the U.S. Environmental Protection Agency (EPA) sponsored a pollution prevention workshop for metal finishers. Metal finishers from Western New York learned how to reduce water usage, lower pollutant loading and save money by reducing chemical and water usage.
- DES adopted Best Management Practices (BMPs) in lieu of traditional permit and discharge monitoring as a way to regulate the nearly 900 commercial businesses involved with film developing and approximately 500 dentists potentially involved with silver-containing amalgam fillings. The BMP doubles as a Standard Operating Procedure for facilities with environmental concerns. Contained in the BMP manuals are process descriptions, pollution prevention measures, treatment requirements, equipment performance measures and record keeping and maintenance procedures.
- The Small Business Pollution Prevention Task Group, in cooperation with NYSDEC, held an Auto Recyclers Pollution Prevention workshop for Region 8. The *Auto Recyclers Guide to a Cleaner Environment: Best Management Practices* manual and poster were finalized and distributed at the workshop and by NYSDEC officials throughout Region 8. The Group began development of a brochure for home auto mechanics.

III. Water Quality Operations

A. 2001 Monroe County Facilities Construction Projects, Completion Dates and Contacts

- A preliminary study (dated March 2001) of algae remediation at Ontario Beach Park, conducted by URS Corporation Group Consultants of Buffalo for the U.S. Army Corps of Engineers, addressed beach closings, odor problems, and bacteria problems. It identified ten alternative methods of mitigation involving various forms of barriers, pumping and artificial circulation, circulation gates, chemical treatment, beach reconfiguration, and beach relocation, none of which were 100% assured of eliminating the problem of ponding algae caused by the pier. A follow-up report by the same consultant on alternative development and evaluation is in process, which will quantify and analyze algae volume and impacts on water quality, and then will present eight preliminary alternatives using various combinations of equipment and procedure-based mitigation methodologies. These methodologies include herding and harvesting collection methods, and a variety of dewatering, treatment, and /or disposal options. Some of the alternatives may be evaluated through pilot testing during the summer of 2002. (Contact: Frank Allkofer, 256-4962)
- The Department of Transportation (DOT) completed the following projects:
  - Redman Road culverts replacement, Town of Clarkson, completed September. (Contact: Henry Herdzik, 760-7744)
  - Telephone Road culvert replacement, Town of Henrietta, completed October. (Contact: Karen Cox, 760-7742)
  - Bailey Road Phase 1 – West Henrietta Road to 700' west of John Street, Town of Henrietta, completed December. (Contact: Tim Frelier, 760-7731)
  - Tobey Road realignment at Clover Street, Town of Pittsford, completed December. (Contact: Tim Frelier, 760-7731)
  - Attridge Road bridge rehabilitation, Town of Riga, completed December. (Contact: Henry Herdzik, 760-7744)
  - Ogden-Parma Town Line Road bridge replacement, Towns of Ogden and Parma, completed December. (Contact: Alex Avdenko, 760-7741)
  - Peck Road bridge replacement, Town of Parma, completed December. (Contact: Karen Cox, 760-7742)

- Northwest Quadrant (NWQ) solids handling modifications: One high speed centrifuge, screw conveyor system and off-load building were constructed and installed. The system became operational in the late fall, replacing the incineration disposal process. Now chemically treated sludge is co-disposed with refuse at the Mill Seat Landfill. (Contact: Glenn Curtis, 760-7610)
- Frank E. Van Lare Treatment Plant (FEV) primary clarifier modifications: The primary effluent channels on the east side of the plant were filled in with low-density free-flowing concrete to reduce the excessive depth and to increase flow rates in the channels. By reducing the depth of the channels and changing the slope of the channels, flow rates were increased, eliminating the problem of solids deposition in the channels. This change greatly reduces nuisance odors from the primary clarifiers and will help improve treatment. Completed in June. (Contact: Dave Lukas, 760-7610)
- FEV recirculation pump station improvements: Twenty-two recirculation pumps were refurbished and new variable frequency drives, controllers and new flow metering equipment were installed. This process had previously experienced high maintenance costs and was difficult to operate. The new process allows operators to change and monitor flow rates quickly and accurately, saving energy and optimizing treatment efficiency. The project was substantially completed in December 2000. (Contact: Gary Hettler, 760-7610)
- Gates-Chili-Ogden collection system: Riverdale #6 pump station was refurbished. The wet well was increased in size, and new pumps, new electric service and new flow metering equipment were installed. The new station will provide more reliable and more energy efficient sewer service to residents in Chili reducing the possibility of back-ups during wet weather. Completed November 2001. (Contact: Bill Putt, 760-7568)
- The Monroe County Water Authority (MCWA) completed construction of a five-million gallon, covered, pre-stressed concrete tank in the Town of Sweden. This facility replaces two open storage tanks that were approximately two million gallons in size. The tanks provide storage for the Towns of Hamlin, Clarkson and Sweden, the Village of Brockport, and several areas outside of the County. Completed in July. (Contact: Steven Gould, 442-2000)
- Various watermains and facilities were installed throughout the Town of Webster, including the Five Mile Line transmission main. These improvements accommodated the conversion of approximately 7,000 more customers who were previously supplied by the Village well system to the MCWA's Lake Ontario supply. (Contact: Steven Gould, 442-2000)
- The Monroe Avenue Phase I (of II) project replaced water mains approximately from the Canal to French Road. The existing cast-iron main was prone to frequent failures, especially in the vicinity of French Road. Phase II will replace the existing deficient water mains from French Road to Clover Street and will be completed in 2002. Phase I was completed in September. (Contact: Steven Gould, 442-2000)
- As part of the MCWA's annual tank upgrading program, a one million-gallon steel tank in the Town of Penfield was rehabilitated. The work included structural repairs, various modifications to meet current safety and OSHA standards as well as cleaning and painting. Completed in November. (Contact: Steven Gould, 442-2000)
- The MCWA's Kraeg Road booster station provides increased flows and pressures to most of the southeast portion of the county. Two of the three pumps in this station were upsized from 200hp to 300hp to increase capacity for growing demands in the Towns of Perinton, Pittsford and Victor. Completed in April. (Contact: Steven Gould, 442-2000)
- Evaluated and performed nondestructive in-situ testing (electro-magnetic-resonance) on approximately one mile of 36" pre-stressed concrete cylinder pipe (PCCP) in Lake Avenue near Kodak (completed in March). This water main is a critical component of our west-to-east transmission and has experienced two severe failures. As a result, the most severely deteriorated pipes were replaced in June and plans were developed to replace approximately 3000 linear feet in 2002. (Contact: Steven Gould, 442-2000)
- Replaced meter connections to the Town of Sweden/Village of Brockport and the Village of Spencerport. (Contact: Steven Gould, 442-2000)

B. Key 2001 Point Source Control Accomplishments and Issues at County Wastewater Treatment Plants

- At the NWQ, the installation of the high-speed centrifuge and sludge off-load system replaces incineration for sludge disposal. The lime-treated sludge is now dewatered to a much higher percent solids than with the belt filter presses and is processed at a much higher rate. This has resulted in generating dewatered sludge at a 30% solids level and processing in one-half the time as in the past. The resulting process will utilize less electric power, eliminate process natural gas and reduce air emissions. Incineration will be used as a back-up sludge disposal process if needed.
- The improvements to the FEV primary clarifiers will eliminate an old problem in the process. Excessive depth of the primary clarifier effluent channels resulted in low process flows in the channels, resulting in solids deposition. The excessive solids deposition would generate nuisance odors and some treatment difficulties. By reducing the channel depth and increasing the slope within the channels, flow rates are increased, thereby eliminating solids deposition and significantly reducing nuisance odors from this process.
- The completion of the recirculation pump system improvements at FEV has provided the treatment process with reliable pumping systems. Pumping rates can be easily modified to deal with changing process conditions. The system improves reliability and energy efficiency.

C. Key 2001 Point Source Control Accomplishments and Issues at Town and Village Wastewater Treatment Plants

1. The Village of Spencerport:
   - Continued an infiltration and inflow control program including grouting of sewer joints, slip-lining of sewer mains, replacement of manholes, and televising of sewers.
   - Continued voluntary phosphorus removal at its wastewater treatment facility.
   - Participated in discussions with representatives of the Towns of Greece, Ogden, and Parma and Monroe County regarding the potential for connecting the wastewater system to the Monroe County Pure Waters wastewater system.

2. The Village of Scottsville:
   - Operated a new aerator system and worked to balance the system operation with assistance from the NYSDEC and Monroe County Pure Waters staff.
   - Continued using its reed bed to process wastewater sludge and transported some sludge to the Van Lare Wastewater treatment plant.
   - Began discussions with Monroe County regarding the potential for connecting the wastewater treatment system to the Monroe County Pure Waters system.

3. The Town of Webster:
   - Completed implementation of Phase II wastewater treatment plant upgrades. The upgrade work included a mechanical gravity belt thickener system, digester rehabilitation, and new feed pumps in the digester building.
   - Received wastewater from several additions to the sewer collection system built by private developers to service new development in the Town.
   - Coordinated with other agencies to design a sanitary sewer collection system for the Irondequoit Bay sand bar.

4. The Village of Webster:
   - Continued to reduce its flows due to continued conservation efforts at Xerox Corporation.
   - Continued to operate its sludge/leaf composting project.
   - Continued its program of grouting collection sewers to reduce the potential for infiltration of stormwater into the sewers and exfiltration of sewage from the sewers.
   - Conducted preventive maintenance on the digesters and rebuilt one of the primary settling tanks.
   - Conducted testing for stormwater discharged into the system and removed some stormwater discharges into the plant.

5. The Village of Churchville:
   - Continued design work for planned sewer connections from the Village of Churchville to the Monroe County Pure Waters system. Meanwhile, the Village Wastewater Treatment Facility operations continued.

6. The Village of Honeoye Falls:
   - Replaced an existing 8" sewer line with a 12" sewer line in the vicinity of North Main Street.
   - Investigated the potential for replacing the existing sand filter system with a disc filter system.

D. Key 2001 County Stormwater Management Accomplishments

1. Environmental Health Laboratory:
   - A Water Resources Investigations report on the Mill Road Detention Basin demonstration wetland project was published. Activities on the project were discontinued during 2001 to devote resources from this project to the Irondequoit Watershed Model.
   - Municipalities within the Irondequoit Creek Watershed, in cooperation with the U.S. Geological Survey, continued work on a project to create a mathematical model of the watershed. The model will be useful in predicting the impacts of current and future changes in land use and potential flood storage on water quantity and quality. The municipalities include the Counties of Monroe and Ontario, the Towns of Penfield, Brighton, Henrietta, Perinton, Pittsford, Mendon, and Victor, and the Villages of East Rochester, Pittsford, and Fairport. Municipal representatives provided data on land use and zoning changes over the past 20 years for incorporation into the model. Hydrologic components of the model were completed, and an introductory session on these was completed in the fall of 2001. Work continued on the water quality components, with model completion and training of partners anticipated in the fall of 2002.

2. The Department of Transportation (DOT)
   - Maintained an existing detention area was maintained as part of the Tobey Road realignment project.
   - Used current accepted erosion control measures as part of every construction project.

3. The Soil and Water Conservation District (SWCD)
   - With assistance from the Health Department, monitored the effectiveness of an underground proprietary product designed to remove stormwater pollutants. The product is installed at the Brighton Department of Public Works and receives stormwater from the two-acre parking area and maintenance facility.
   - Held a public information meeting/rollout of the North Chili Tributary of Black Creek Watershed Plan with approximately 35 residents to discuss the contents of a watershed plan.
   - Presented the Annual Excellence in Stormwater Management Award to the municipalities in the Irondequoit Creek watershed for their efforts to collaborate on stormwater management policy and design criteria.
   - Co-hosted the Stormwater Computer Modeling Training with NYS Soil & Water Conservation Committee and DES; 40 attendees.

E. Key 2001 County Agricultural Operation Accomplishments

1. The USDA Natural Resources Conservation Service (NRCS):
   - Maintained conservation plans on 18,000 acres of highly erodible cropland.
   - With the assistance of the USDA Farm Service Agency, kept 736 acres of environmentally sensitive cropland under permanent vegetative cover through the Conservation Reserve Program.
   - Received $12,000 through the Agricultural Management Assistance program to control erosion caused by surface water on 40 acres of cropland.

- Restored 75 acres of degraded wetland under the Wetlands Reserve Program. Accepted 115 new acres into the program on 8 different sites.
- With the assistance of a private consultant, completed one Comprehensive Nutrient Management Plan on a 1,200-acre dairy operation.
- Planted 23 acres of warm season grasses and maintained 12 acres of upland bird habitat under the Wildlife Habitat Incentives Program.
- Provided ongoing assistance to farmers and planners/consultants in meeting federal water quality requirements.
- Resolved runoff issues on suburban/agricultural areas and provided technical assistance to farmers regarding water quality and erosion control.
- Provided ongoing assistance to the County SWCD in their effort to meet the needs of their customers.

2. The SWCD:
   - Visited approximately 20 agricultural operations, and reviewed their management practices for potential impacts to water quality.

IV. Water Quality Monitoring and Regulatory Activities

A. Key Results of the Most Recent Ambient Water Quality Monitoring by the Environmental Health Laboratory

- Monitoring conducted on discharges from the Erie Canal indicated that a discharge through the Fairport waste channel in the Village of Fairport of approximately 5.4 cubic feet per second (cfs) throughout the 2000 operating season was reduced to approximately 3 cfs during the 2001 operating season. This discharge carried an average Total Phosphorus (TP) load of approximately 0.4 kg/day, or approximately 3% of the TP goal of 14 kg/day for the entire Irondequoit Creek watershed. This load reduction is consistent with the reduction in discharge at this site. Total loading from Canal sources to the Irondequoit Creek watershed in 2001 was approximately 1.9 kg/day, or approximately 14% of the TP goal for the entire watershed. The high overall percentage in 2001 is possibly a reflection of lowered nutrient input from other sources due to lack of rainfall and associated washoff, and serves to underscore the significance of canal nutrient inputs to Irondequoit Creek during baseflow periods.
- Rochester Embayment monitoring as part of the NYSDEC Lake Ontario Bioindexing project was discontinued due to elimination of funding for this effort by the NYSDEC Division of Water. Phosphorus concentrations in the near-nearshore of the Rochester Embayment (1 meter depth) were tracked and found to be higher than the approximately 10 meter depth concentrations measured in samples collected in cooperation with Rochester Gas and Electric Company at the Russell Station plant.
- Monitoring of Irondequoit Bay demonstrated that continued addition of oxygen to the metalimnion of the Bay has been effective in delaying the onset of anoxia in the hypolimnion of the Bay until late summer. It has been effective at maintaining oxygen levels suitable for zooplankton and some higher consumers throughout the summer. The amount of oxygen necessary to maintain these conditions declined again in 2001.
- Closure of the swimming area at Ontario Beach due to intermittent water quality impacts remained an issue, with swimming permitted in some sections of the beach area or for some part of a day on 56 or 70% of the possible days. The tool for the evaluation of the performance of the Ontario Beach Model, developed in 1998, indicated that the model correctly predicted safe swimming conditions 90% of the time, and correctly predicted unsafe swimming conditions 76% of the time.

B. Key Results of the Most Recent Best Management Practices Effectiveness Monitoring by the Environmental Health Laboratory

- The efficiency of nutrient removal by the weir at the Irondequoit Creek Narrows was 12%. The efficiency was low in 2001 because the annual precipitation was below average. More precipitation results in more stormwater runoff and thus higher removal efficiencies. Stopgates and stoplogs were in place for most of the operating season, but may not have had a significant effect due to the low flow conditions and small number of runoff events experienced during the summer and fall.
- Data on stormwater ponds obtained during the third year of using new cost-effective thermal monitoring equipment indicated that all discharges had thermal impacts. Deep discharge from a deep pond system had the least thermal impact, but data is limited in 2001 due to dry conditions and lack of rainfall events. Further investigation of the issue of thermal impacts of best management practices will continue during the spring and summer of 2002 at locations monitored in 2000 and 2001.
- At the end of the 2001 fiscal year, the Environmental Health Laboratory was merged with the Department of Environmental Services Pure Waters Laboratory. Former EHL staff responsible for educational, data analysis, and project implementation and management are now housed in the Monroe County Health Department Division of Environmental Health Bureau of Water Quality, and will report on measures in conjunction with that agency.

C. Key Results of 2001 County Wastewater Monitoring

- The FEV treatment plant had six excursions to the plant discharge permit in 2001. All the excursions were exceedances of the settleable solids permit limit of 0.3 ml/L. Four of the six excursions occurred during wet weather events at the treatment plant. Plant flows were roughly two to three times greater than normal conditions. The operators must quickly modify the plant treatment process to accommodate the higher wet weather flows. Modifications to the plant process could not eliminate the problems. Monitoring of key process indicators was doubled to help the operators make better decisions during the wet weather flow events. System rain gauges are used to help predict plant flows and better prepare for operations during a wet weather event. The two remaining settleable solids excursions occurred during a dry weather flow period. Algae were identified as settling out in our laboratory testing equipment. Monitoring data documents that the plant was achieving excellent pollutant removals at this time. The weirs on the secondary clarifiers were flushed, removing the algae build up and the problem was eliminated. These excursions were believed to be due to poor sampling. Increased effluent weirs cleaning frequency was initiated to eliminate this problem. See the annual monitoring report summary for FEV in Table 2.
- The NWQ treatment plant had five excursions to the plant discharge permit in 2001. One excursion was the exceedance of permitted plant flow. During March precipitation was twice the normal amount. This precipitation resulted in higher than permitted plant flows for the month. The Towns discharging to the system have historical stormwater inflow and infiltration problems. This problem causes large amounts of stormwater to enter the sanitary sewer system. Work was initiated at the NWQ drainage basin to identify problem portions of the sewer system. Long-term corrective solutions to the problems will then be identified and recommended. Another permit excursion was caused by the high treatment plant flows. The plant discharge permit requires 85% total suspended solids removals. During periods of high flow, the influent sewage concentration becomes dilute because of the higher percentage of stormwater. When this happens, it is difficult to maintain 85% removal, even though the effluent concentration of total suspended solids is low and in compliance. The fecal coliform seven-day geometric mean was exceeded for two monitoring periods. One excursion was caused by a faulty sodium hypochlorite feed pump, which was not delivering the proper amount of chemical for disinfection. The pump was replaced and the problem was resolved. Poor mixing of the chemical and the treated effluent caused the second excursion. The application point was changed, resulting in better mixing and more efficient use of the chemical. The last excursion to the permit was

a settleable solids excursion. On May 12, a rainstorm dumped 0.85 inches of rain within a short timeframe. High plant flows caused a release of solids for a short time frame resulting in an excursion. Total suspended solids for the day were low and in compliance with the discharge permit. See the annual monitoring report summary for NWQ in Table 3.

D. Key Results of 2001 Onsite Sewage Facilities Programs

It is estimated that onsite sewage disposal systems serve approximately 25% of the homes in Monroe County or about 60,000 households. Onsite systems also serve many commercial and industrial properties. Regulation of these facilities is the responsibility of the Monroe County Health Department under Article 17 of the NYS Environmental Conservation Law, the NYS Public Health Law, and the Monroe County Sanitary Code. Following are some key individual sewage disposal (ISD) program statistics for 1999, 2000 and 2001. Note that in 2000 and 2001, site inspections and construction inspections have been combined.

Program	Category	1999	2000	2001
Residential ISD	# Plans Approved – ISD	93	117	117
	# Site Inspections	686	840	951
	# Construction Inspections	356	470	547
	# Construction Permits – ISD Repairs	238	245	237
	# Plans Approved – Realty Subdivision/ISD	2	7	5
	# Site Inspections – Realty Subdivision/ISD	342	328	475
	# Construction Inspections	957	691	802
	# Complaints	69	117	68
	# Enforcement Actions	6	8	6
Commercial/Industrial ISD	# Plans Approved	16	6	11
	# Enforcement Actions	0	0	0

E. Key Results of Stormwater Management Project Review and Stormwater Management Inspections

- The County SWCD, Department of Planning and Development, and the Town of Perinton hosted the Code Enforcement Officers Roundtable Discussion. Thirty-five officials from 17 municipalities attended. The objective of the session was to discuss challenges of enforcing erosion and sediment control ordinances and to brainstorm ways to meet these challenges.
- Approximately 25 development plans were reviewed in 2001 for impacts to water quality from construction and post-construction stormwater runoff.

F. Key Results of Hazardous and Toxic Materials Disposal Programming

1. Hazardous Materials and Stream Pollution Complaint Response (contact: Richard Elliott, 274-6067)

   The Monroe County Department of Health serves as the first responder to hazardous materials and stream pollution complaints for the NYSDEC under a Letter of Agreement between the County and NYSDEC. Following are some key program statistics for 1999, 2000 and 2001:

Program	Category	1999	2000	2001
Hazardous Materials	# Incidents Reported	669	515	703
	# Field Responses	229	156	181

	# Haz-Mat Team Responses	84	60	87	
Program	Category	1999	2000	2001	
Stream Pollution	# Complaints		73	69	28
	# Field Responses	45	40	13	

In December a CSX freight train carrying coal and two hazardous chemicals (acetone and methylene chloride) sped out of control from Kodak Park and ultimately crashed along River Street, north of the Stutson Street Bridge. Approximately 16,000 gallons of acetone and 16,000 gallons of methylene chloride were released to the environment. NYSDEC is overseeing the clean up of the site by CSX and their contractors.

2. NYS Hazardous Waste Site Program

a. Hazardous waste sites

Status of Monroe County Inactive Hazardous Waste Sites

	1999	2000	2001
# of sites	48	48	51
# of Class 2a sites (inadequate data)	3	3	5
# of Class 2 sites (significant threat)	32	30	30
# sites delisted *	1	1	2
# sites added	1	1	3
# Preliminary Site Assessments completed using State Superfund	1	1	1

* Delisted sites are sites that have been remediated and found to be nonhazardous
(Note that there are also some Class 3 and 4 sites in the County.)

b. Hazardous substance sites (The definition of "hazardous substance" is broader than "hazardous waste.")

In 1994 New York State Law was amended to require the NYSDEC, in consultation with the New York State Department of Health, to conduct a study and inventory hazardous substance waste sites in New York State. The study was completed in 1995 and listed 24 sites in Monroe County, 12 of which were sites that were removed from the inactive hazardous waste sites list. The status remained unchanged in 2001.

c. Brownfields

In the fall of 1996 New York State voters approved the Clean Water/Clean Air Bond Act. This action established a $200 million Environmental Restoration Project Fund, known as the Brownfields Program. The following is the status of sites in Monroe County that have been approved for funding under this program.

Site	Applicant	Status
APCO/Artuso	Rochester (C)	Investigation completed/Interim Remedial Measure (IRM) completed; remediation began in 2001.

Site	Applicant	Status
Photech	Rochester (C)	Investigation completed/IRM completed; delays due to contract problems with consultant.
Gonsenhauser Farm	Brighton (T)	Investigation completed. Preliminary Remedial Action Plan is being prepared.
1200 East Main St.	Rochester (C)	Investigation completed; a supplemental investigation has been planned.

d. Voluntary cleanup

The NYSDEC has developed a program designed to promote voluntary cleanup and/or investigation of contaminated sites including inactive hazardous waste sites [other than Class 1 ("imminent danger") or Class 2 sites], petroleum-contaminated sites and solid waste disposal sites. A volunteer (developer, municipality or a responsible party) enters into an agreement with the NYSDEC, which provides clear guidelines regarding the identification of site contamination. The agreement also contains a specific remediation plan and schedule. The volunteer can obtain a release from further liability for past contamination at the site once agreed-upon cleanup levels are reached. There are approximately 30 sites in Monroe County for which investigation and remediation were initiated under the Voluntary Cleanup Program (VCP). New sites in the VCP in 2001 include:

- Fishback and Moore, Brighton (T)
- Speedy's Cleaners, Pittsford (T)

Following are some highlights of the hazardous waste site program for 2001 in Monroe County:

- Staff completed the Final Report on the Environmental Health Education Plan that was supported by a grant from the National Association of City and County Health Officials. Under the grant, five newsletters were published and an availability session was held to help the residents of the Village of Brockport understand the health issues associated with two nearby inactive hazardous waste sites (GE/Black & Decker and 3M/Dynacolor).
- GE and 3M conducted sampling of Tributary 3 of Brockport Creek. This was a major effort that lasted several weeks and generated reams of soil and sediment data.
- The Record of Decision was issued for Trimmer Road landfill. The remedy will consist of phytoremediation with long-term monitoring.
- The Record of Decision was issued for Operable Unit (OU) 2 of the Chemical Sales site. The remedy will consist of natural attenuation and modified pump-and-treat at the boundary between OU-1 and OU-2.
- The draft Proposed Remedial Action Plan was issued for the Golden Road site.
- Remediation, consisting of the application of hydrogen-releasing compounds, commenced at the CooperVision site.
- The City of Rochester commenced remediation of a large brownfield project, the APCO site.

G. Key Results of Drinking Water Monitoring

The Monroe County Water Authority (MCWA) supplies drinking water to 650,000 people on a retail and wholesale basis. In 2001 there were no treatment plant or distribution system bacteriological or chemical Maximum Contaminant Level violations. The MCWA's two treatment plants were in full compliance with all current operational, monitoring, and reporting requirements. The water provided by the MCWA consistently met or exceeded all New York State and EPA drinking water standards. MCWA's 2001 Annual Water Quality Report is available on the web at www.mcwa.com. The report can also be obtained by calling MCWA Customer Service at 442-7200.

H. Assessment of Water Quality

1. Rochester Embayment

   a. Benthic macroinvertebrate community health

   Dr. Joseph Makarewicz and associates performed a preliminary evaluation of benthic macroinvertebrate community health at four sites within the Embayment.[3] Results were based on the Biological Assessment Profile (BAP):

Macroinvertebrate Community Health in the Rochester Embayment

Site	Impact to macroinvertebrate communities
Army Dredge Disposal Site	*Severely impacted
Russell Station	*Severely impacted
Genesee River site at Portland Cement, Inc.	Moderately impacted
Genesee River Plume in Lake Ontario	Moderately impacted
*Severe impact is an indication of poor water quality.	

   The conclusion of a severely impacted community at the Russell Station site must be viewed with caution. Rather than being impacted by chemical or organic matter pollution, there is some evidence suggesting that siltation may be the cause of the low species richness observed. The study is not considered to be conclusive. More samples are required over a larger area of the Embayment.

   b. Eutrophication data

   The Environmental Health Laboratory compiled data for 1998-2001 for total phosphorus, soluble reactive phosphorus and chlorophyll in the "near-near" shore of Lake Ontario (1 meter depth) and the "near" shore (11-12 meter depth). The purpose was to gain a better understanding of eutrophication along the shoreline. The three chemical parameters are indicators for eutrophication.
   (See Table 4.)

   Some *preliminary* conclusions can be drawn:
   - The similarity of "near-near" shore data from outside and inside the Rochester Embayment may indicate that the eutrophication problem is lakewide and not exclusive to the Rochester Embayment.
   - As of 2001 there does not appear to be a significant eutrophication problem in the "near" shore area of the Rochester Embayment.

2. Genesee River Basin

   a. NYSDEC 2000 water column toxicity data

   Water column samples were collected from the Genesee River basin in 2000 as part of the Rotating Intensive Basin Studies (RIBS). The samples were subjected to seven-day *Ceriodaphnia dubia* (water flea) chronic tests for reproduction and survival. Usually three samples collected at different times were tested. Reproductive impairment was defined as a sample showing a reproductive rate that is statistically significantly less than controls, and less than 15 young/female over a seven-day period. Impaired survival was determined when survival in an exposure group was statistically lower than controls.

Reproductive and Survival Data of Water Flea at Sites in the Genesee River Basin

Site	Reproduction	Survival
Black Creek at Byron	No significant impairment	No significant impairment
Genesee River at Rochester	Significant reproductive impairment in one of two samples*	No significant impairment
Honeoye Creek at West Rush	No significant impairment	No significant impairment
Oatka Creek at Scottsville	No significant impairment	No significant impairment
Thomas Creek at East Rochester	Severe impairment in one of three samples**	Significantly different from control in one of three samples
*No measured contaminant was determined to cause the toxicity. **Several chemical parameters are elevated in samples at this location.		

b. NYSDEC Sediment Assessment

As part of the RIBS program, NYSDEC used freshwater sediment guidelines developed by MacDonald et al to evaluate the metal, PAH, PCB and pesticide levels of sediments in the Genesee River Basin.[4]

Definitions:
Threshold effect concentration (TEC): Below the TEC, adverse effects on sediment-dwelling organisms are not expected to occur.
Probable effect concentration (PEC): Above the PEC, adverse effects are expected to occur more often than not.
Levels that fall between the TEC and PEC, while not as likely to cause adverse effects as those above the PEC, are considered to be of concern.

The table below gives contaminant levels relative to MacDonald et al's TEC and PEC values for sites in the Genesee.

Contaminant Levels in Sediments at Sites within the Genesee River Basin

Waterbody	Analytes between TEC and PEC (level of concern for adverse effects)	Analytes above PEC (adverse effects expected to occur)
Black Creek in Byron	Cadmium	None
Genesee River in Rochester	PAHs (anthracene, benz(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene, pyrene and Total PAH)	None
Honeoye Creek in West Rush	Cadmium, pesticides (DDE and total DDT), PAHs (benzo(a)pyrene)	None
Oatka Creek in Scottsville	Cadmium, copper	None
Thomas Creek in East Rochester	PAHs (benz(a)anthracene, benzo(a)pyrene, chrysene and fluoranthene, pyrene and total PAH)	None

PAH: Polycyclic aromatic hydrocarbon
DDE: Dichlorodiphenyl dichloroethylene (Banned pesticide)
DDT: Dichlorodiphenyl trichloroethane (Banned pesticide)

3. Irondequoit Bay trophic status

Trophic status, which is an indicator of Irondequoit Bay water quality, has been improving since the 1970s due to the reduction of nutrients discharged to the Bay. (See Figure 2, which is based on data from sampling at Empire Boulevard.)

I. Recommended Changes in Surface and Groundwater Classification

The Monroe County Water Quality Coordinating Committee (WQCC) discussed the need to recommend changes to surface and groundwater classifications at meetings held in May and June of 2002. It was agreed that recommendations made in previous WQMA Annual Reports should be made again and highlighted in a letter to the New York State Department of Environmental Conservation. Those recommendations follow:

One concern is the classification of the New York State Barge Canal (also known as the Erie Canal) as it goes through Monroe County. The current classification of the Canal is Class C (best use determined by NYSDEC to be fishing and boating) to the west in Orleans County and through Monroe County until the area 0.3 miles northwest of the Lee Road bridge very close to the Route 390 crossover. From this point east to Lyndon Road in Perinton, it is classified as Class B (best use determined by NYSDEC to be swimming). From Lyndon Road eastward into Wayne County it is then reclassified as C. (See Figure 3) It is the recommendation of the WQCC that the entire stretch of the canal within Monroe County be classified as Class B in order to ensure consistency throughout Monroe County.

The Genesee River is designated as a Class C stream from Livingston County to the point where Oatka Creek enters the Genesee River. From that point to the mouth of the River, it is designated as Class B. The WQCC recommends that the Genesee River be classified as Class B throughout Monroe County. The WQCC also recommends that NYSDEC investigate classification of other reaches of the Canal and Genesee River to gain consistency within counties.

In addition to the above-noted recommendations made in past years, one new recommendation is made in this report.

Monroe County recommends that the NYSDEC enter into a dialog with the Monroe County WQCC regarding reclassification of tributaries of Class B streams in Monroe County. We request that the dialog be

initiated at the December, 2002 meeting of the Monroe County WQCC. Class B streams with tributaries that warrant a reclassification discussion include those tributary to Mill

Creek, Shipbuilders Creek, Four Mile Creek, Hipp Brook, Commission Ditch, and some headwaters of Irondequoit Creek, Thomas Creek, and Allen Creek. These tributaries in some cases may be intermittent in the

summer or in other cases have been incorporated into urban drainage systems that need some regular maintenance to ensure good flow of water. We would like to discuss options to ensure protection of

the resources while avoiding complex permitting procedures currently required to allow municipalities to maintain flow in such small protected streams.

V. Future Programming: Summary of 2002 Program Types and Referral to Water Quality Coordinating Committee Workplan

The Water Quality Coordinating Committee's 5-year workplan is available from the Monroe County Department of Health. This plan outlines monitoring, planning, operations, and education projects that are being conducted now or will be considered in the future by Monroe County Departments; the Environmental Management Council; the New York State Department of Environmental Conservation; the Monroe County Water Authority; the Monroe County Soil and Water Conservation District; the Natural Resources Conservation Service; the City of Rochester; Towns; the New York State Department of Transportation; Cornell Cooperative Extension; and the Water Education Collaborative.

2002 water **monitoring** programs are being conducted in Irondequoit Bay and Creek; the Genesee River and its tributaries, Allen, Northrup, Oatka, Black and Honeoye Creeks; the Erie Canal; the nearshore areas of Lake Ontario; and public beaches. Monitoring through response to complaints is also ongoing. Monitoring of several streams is also underway by volunteer stream teams through the Community Water Watch Program. The State University of New York at Brockport received two grants that will help Monroe County measure progress toward delisting use impairments identified in the *Rochester Embayment Remedial Action Plan*. The projects are due to be completed in 2002. One project is determining baseline levels of bioaccumulative chemicals of concern in air, water, sediment, and sentinel species. The other is comparing two kinds of analytical methods. In addition, County funds and grants have been obtained to conduct a survey of algae growth in Lake Ontario through the use of hyperspectral imaging. The Rochester Institute of Technology is conducting this work. The Health Department in cooperation with NY Sea Grant, the Great Lakes Research Consortium and the Water Education Collaborative received grant funding to hold a workshop to examine the factors contributing to algae growth in Lake Ontario and potential solutions to address this problem. The U.S. Fish and Wildlife Service is also obtaining funding to monitor Genesee River water quality and habitat for the potential use of the native sturgeon. A monitoring program that includes monitoring various kinds of wet areas for mosquito larvae is being conducted as part of West Nile Virus surveillance. A County Environmental Report Card that summarizes environmental trends is available and is in the process of being updated (call 274-6067).

Planning projects ongoing in 2002 include several projects recommended in the *Rochester Embayment Remedial Action Plan* and other planning documents. Some examples include development of a stormwater management strategy to meet Federal Phase II Stormwater regulations, West Nile Virus response planning, highway maintenance erosion control, a harbor management plan for the waterfront edge of Irondequoit Bay and Creek in the Towns of Irondequoit, Penfield and Webster, a hiking trail plan for Irondequoit Bay, geographic information system data development, the establishment of water quality intermunicipal agreements, the development of small watershed plans and a watershed model, development plan review, grant applications for new projects, environmentally sensitive land acquisition, farmland protection, agricultural management planning, a road salt management program, wastewater treatment facility upgrade planning, and a project to address water quality problems at Charlotte Beach. A competitive grant was received to initiate a watershed plan for the Black Creek watershed.

Significant **operations** projects include implementation of agricultural best management practices, pollution prevention activities, streambank erosion control, household hazardous waste collections, unused agricultural pesticides collections, brownfield cleanups, watermain extension project to remediate effects of a hazardous spill, installing new sludge handling systems in sewage treatment plants, continued design and construction of an airport glycol recovery system, highway stormwater management system construction, geese management,.

Educational efforts ongoing in 2002 include administration of the Community Water Watch Program (CWW), the Great Lawns/Great Lakes Education Program (GL/GL), the hiring of a Volunteer Coordinator for the CWW and GL/GL programs, wetlands and stormwater education efforts, West Nile Virus education, operation of the Water Education Collaborative organization, and special events.

Information Sources

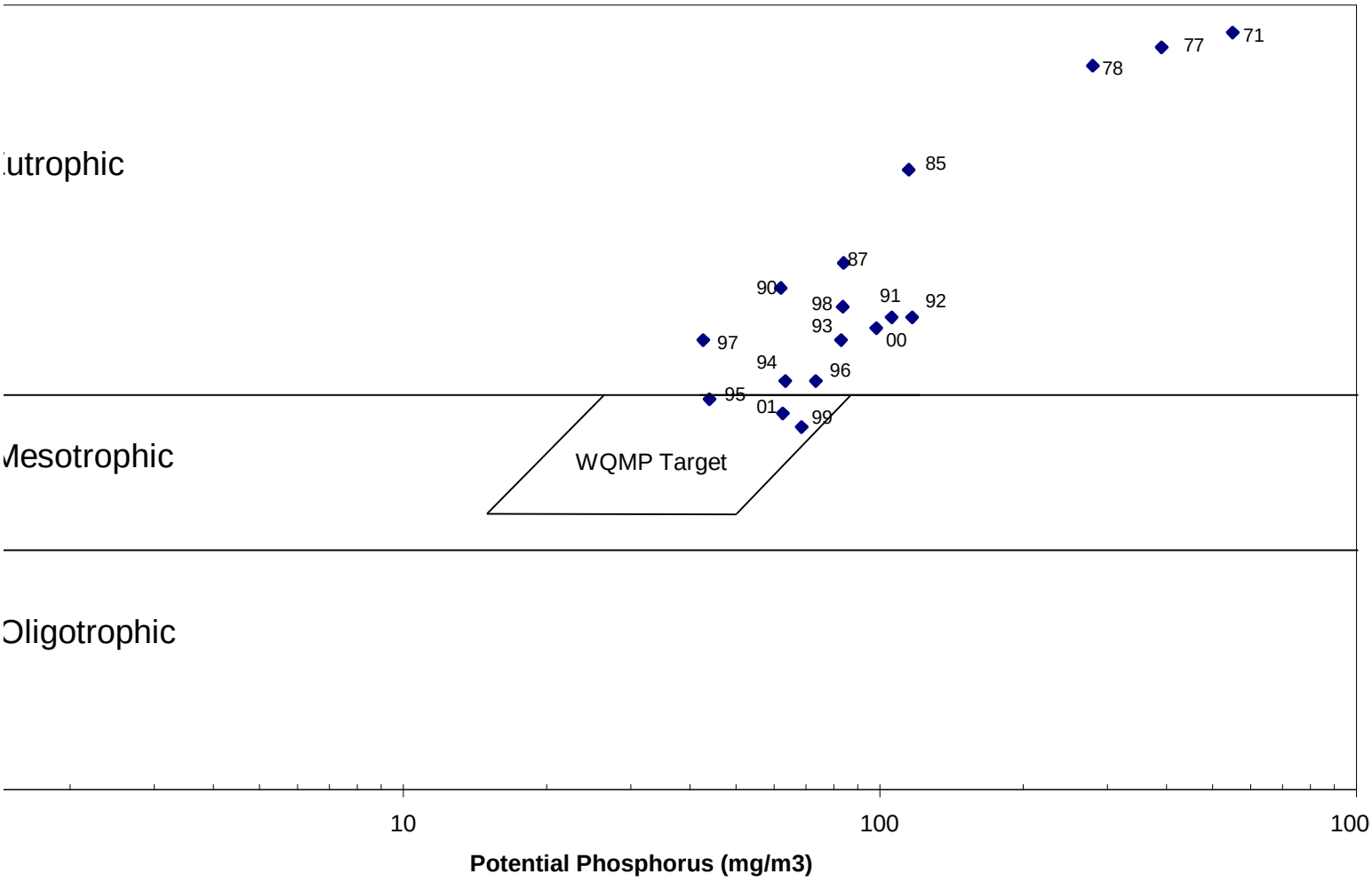
1. U.S. Census Bureau, Census 2000.

2. Land Use Report for Monroe County, 2002, Monroe County Department of Planning and Development.

3. Makarewicz, J.C., Arnold, M., Lewis, Theodore W., and Beal, C., 2001, *Ecological Health of Sediments Located in the Rochester Embayment, Lake Ontario, NY.* Center for Applied Aquatic Science and Aquaculture, SUNY Brockport.

4. MacDonald et al, 2000. *Archives of Environmental Contamination and Toxicology*, 39:20-31, "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems".

Irondequoit Bay Improvements in Trophic State 1971-2001



1991-2001 Houshold Hazarddous Waste Collection Summary

YEAR	Perm. Facility	Mobile Collect.	Total Collections	# Residents	CESQG's	Kodak Tons	Safety-Kleen Tons	International Waste Remov. Tons	Tot Tor
1991	7	0	7	595	0	5.42	15.05	0	20.
L992	18	0	18	1426	0	41.29	27.96	0	69.
1993	18	0	18	1268	0	26.85	20.31	0	47.
1994	18	0	18	1745	0	25.52	37.06	0	62.
1995	17	1	18	2414	23	25.68	57.68	0	83.
1996	14	9	23	3259	45	42.68	77.3	0	119
1997	11	13	24	4294	49	78.64	133.38	8.25	220
1998	13	11	24	5381	83	36.6	57.3	114.3	208
1999	24	12	36	5474	113	51.3	71.7	43.7	166
2000	78	1	79	4638	131	44.4	135.5	0	179
2001	85	9	94	7158	103	66.3	204.25	0	270
Total=	303	56	359	37652	547	444.7	837.5	166.3	142